

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
Amendment of the 47 CFR Part 97)
Amateur Radio Service and/or)
Amendment of the 47 CFR Part 95)
Subpart B Family Radio Service)
to Permit Non-Amateur Non-United States)
Resident Foreign Nationals Access to the)
446.0 - 446.1 MHz Band)

RM - 10____

PETITION FOR RULEMAKING

Submitted by:

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01-458

I.

INTRODUCTION

1. Before the Federal Communications Commission (Commission) is this Petition for Rulemaking (**PETITION**) requesting amendment of the 47 CFR Part 97 Amateur Radio Service (ARS) and/or amendment of 47 CFR Part 95 Subpart B Family Radio Service (FRS) rules to allow visiting/transient/tourist non-amateur non-United States (US) resident foreign nationals access to certain frequencies within the 446.0 - 446.1 MHz band for the use of license exempt International Telecommunications Union (ITU) Region 1 Conference of European Posts and Telecommunications Administrators' (CEPT) European Radiocommunications Committee (ERC) of Decisions adopted [ERC/DEC/(98) 25¹, 26² and 27³] and European Telecommunications Standards (ETS) Institute (ETSI) approved [technical standard ETS 300 296]⁴ 446 MHz Personal Mobile Radio (PMR 446) service two-way transceivers.

II.

PETITIONER QUALIFICATIONS

2. Petitioner is an unlimited licensed, board certified and actively practicing General Medicine/Family Practice Physician and Surgeon. Petitioner holds the academic faculty appointment of Assistant Clinical Professor, Department of Family Medicine, Georgetown University School of Medicine. Petitioner holds the current positions of Virginia [State] Osteopathic Medical Association (VOMA) Delegate and Delegation Vice-Chairman to the [National] American Osteopathic [Medical] Association (AOA) House of Delegates. Petitioner has held the previous positions of President (CY'94) – Alexandria (VA) Medical Society, Vice-Councilor (EY'95) - Medical Society of Virginia 8th U.S. Congressional District, Chairman – AOA Technology and Health Care [Telemedicine] Task Force, and Executive Member - AOA Council on Federal Health Programs.

3. Petitioner was selected/elected and currently serves as the Special Emergency Radio Service Representative – RPRC, and Medical Profession Representative - Technical Committee, of the National Public Safety Planning Advisory Committee's (NPSPAC) Region-20 [State of Maryland, Washington, DC, Northern Virginia] 821 MHz Public Safety Regional Plan Review Committee (RPRC), for the development and implementation of a Public Safety National/Regional Plan (GN Docket No. 90-7) for the use of the 821-824/866-869 MHz bands by the Public Safety Services pursuant to the Report and Order in GN Docket No. 87-112. Petitioner has previously served as Chairman - Legislative/Regulatory Affairs, Region-20 821 MHz Public Safety from 1990 to 2000.

4. Petitioner is also a First Class Telecommunications Engineer, certified by the National Association of Radio and Telecommunications Engineers (NARTE), possessor of a First Class Certificate of Competency, issued by the Association of Public Safety Communications Officials, Inc. - International (APCO), and Fellow of The Radio Club of America. Petitioner has over 25 years experience in the telecommunications field with many of these years spent actively participating in Commission proceedings.

5. Petitioner is Commission licensed in the Amateur Radio (ARS), Business Radio (BRS), General Mobile Radio (GMRS) and Special Emergency Radio (SERS) services. Petitioner has taken examination for and has been issued the Commission's commercial GMDSS Radio Maintainer, GMDSS Radio Operator, and General Radiotelephone Operator Licenses. It is with having the above extensive expertise in dealing with personal, business, medical and emergency/public assistance communications matters that this Petitioner is qualified to submit the following **PETITION**.

III.

PETITION FOR RULEMAKING

6. In 1995, the Commission issued a Notice of Proposed Rulemaking (**NPRM**) proposing the creation of a Family Radio Service (FRS) using select frequencies from the 462.5500 - 467.7500 MHz GMRS band⁵. After extensive deliberations in that proceeding⁶, the Commission adopted the FRS Report & Order (FRS R&O)⁷ permitting the manufacture and use of license exempt radios having fourteen (14) - 12.5 KHz offset channels spaced 25 KHz apart⁸, 12.5 KHz authorized bandwidth⁹, and a restricted output power of 0.5 watts Effective Radiated Power (ERP)¹⁰ employing an integral antenna.¹¹

7. In 1998, the CEPT/ERC of Decisions proposed and adopted a similar 0.5 Watt ERP, 12.5 KHz authorized bandwidth, license exempt, 446 MHz personal mobile radio service called the PMR 446¹². In 1999, the United Kingdom (UK) adopted a 446 PMR service¹³ in compliance with the CEPT/ERC of Decisions.¹⁴ Unlike the Commission's adopted FRS, the PMR 446 utilizes eight (8) - (+/-) 0.0625 MHz offset channels, spaced 12.5 KHz apart, in the 446.0 - 446.1 MHz band¹⁵.

8. In ITU Region 1¹⁶, for which Europe resides within, the 446.0 - 446.1 MHz band has been allocated to the non-amateur land mobile radio services, of which the PMR 446 falls within¹⁷. In ITU Region 2¹⁸, for which the United States resides within, the 446.0 - 446.1 MHz band is allocated to the ARS¹⁹. Therefore, the use of license exempt FRS radios within ITU Region 1 and the use of license exempt PMR 446 radios within ITU Region 2 are, respectively, illegal. However, these facts are generally unknown by the majority of the public who use these low-power transceivers.

9. This Petitioner had the opportunity of traveling to the UK in March 1998 and Walt Disney World (WDW) Orlando, Florida in August 2001. On the UK visit, numerous United States citizens were operating their FRS radios, in violation of British radio regulations. Conversely this Petitioner was able to receive, via ARS 440 MHz UHF equipment at WDW, extensive transmissions from PMR 446 radios clearly operated by foreign nationals from the UK and France, operating in violation of the Commission's ARS rules and regulations.

10. There appears to be no effort on the part of the Commission, or United States Customs authorities, to stop the illegal importation and use of these PMR 446 radios in the US. If the Title 47 Code of Federal Regulations (CFR) Part 97 ARS rules and regulations are not to be enforced, or more appropriately are deemed essentially unenforceable against traveling foreign tourists, then the Commission should legalize the current illegal use of PMR 446 radios by visiting non-amateur non-US resident foreign nationals in the United States.

11. This Petitioner proposes that the Commission amend 47 CFR Part 97, and/or amend 47 CFR Part 95 Subpart B, and adopt rules & regulations that would permit the use of ITU Region 1 [FRS "like"] PMR 446 radios in the United States by visiting/transient/tourist non-amateur non-US resident foreign nationals on a license exempt secondary basis to primary ARS operations.

12. This Petitioner anticipates some opposition from the Amateur Radio community. As a general class ARS licensee, this Petitioner is sensitive to proposals that could infringe upon ARS spectrum. However, if ultimately adopted, this **PETITION** would have an extreme *de minimis* impact on existing ARS operations²⁰ and would further

promote international *good-will* by not subjecting visiting non-amateur foreign nationals to unknown violations of the Commission's ARS rules and regulations.

IV.

CONCLUSION

13. Before the Commission is this **PETITION** requesting amendment of the 47 CFR Part 97 Amateur Radio Service (ARS) and/or amendment of 47 CFR Part 95 Subpart B Family Radio Service (FRS) rules.

14. This Petitioner is proposing a limited and restricted, license exempt, secondary use of the 446.0 - 446.1 MHz ARS band by visiting/transient/tourist non-amateur non-US resident foreign nationals, using eight (8) - (+/-) 0.0625 MHz channel offset, 0.5 watt ERP, PMR 446 [FRS type] transceivers, for which existing 47 CFR Part 97 rules against the use of such PMR 446 radios in the United States are essentially unenforceable.

15. This **PETITION** will have an extreme *de minimis* impact on existing ARS operations. As such, Amateur Radio community oppositions to this **PETITION**, though respected, would be misplaced and not in the international *public interest* or *good will*.

16. This Petitioner therefore respectfully requests the expedient issuance of a **NPRM** in response to this **PETITION**.

Respectfully submitted,


Dr. Michael C. Trahos, D.O., NCE, CET

MCT/mct

- ¹ **ERC/DEC/(98)25**, ERC Decision of 23 November 1998 on the Harmonised Frequency Band to be Designated for PMR 446. [See also <http://www.ero.dk/doc98/official/Word/DEC9825E.DOC> and/or <http://www.ero.dk/doc98/official/pdf/DEC9825E.PDF> and/or <http://www.ero.dk/doc98/official/zip/DEC9825E.ZIP>.]
- ² **ERC/DEC/(98)26**, ERC Decision of 23 November 1998 on Exemption from Individual Licensing of PMR 446 Equipment. [See also <http://www.ero.dk/doc98/official/Word/DEC9826E.DOC> and/or <http://www.ero.dk/doc98/official/pdf/DEC9826E.PDF> and/or <http://www.ero.dk/doc98/official/zip/DEC9826E.ZIP>.]
- ³ **ERC/DEC/(98)27**, ERC Decision of 23 November 1998 on Free Circulation and Use of PMR 446 Equipment in CEPT Member Countries Enlarging the Field of Application of ERC/DEC/(95)01. [See also <http://www.ero.dk/doc98/official/Word/DEC9827E.DOC> and/or <http://www.ero.dk/doc98/official/pdf/DEC9827E.PDF> and/or <http://www.ero.dk/doc98/official/zip/DEC9827E.ZIP>.]
- ⁴ See DTI Press Release – 30 April 1999, **PMR 446 Service Introduced in the United Kingdom**, Notes for Editors, Paragraph 5. [See <http://www.radio.gov.uk/publication/press/1999/30apr99b.htm>.]
- ⁵ **NPRM**, WT Docket No. 95-102, RM-8499, FCC 95-261, June 22, 1995, 60 FR 45128, August 30, 1995. [See http://gulfoss2.fcc.gov/cgi-bin/websql/prod/ecfs/comsrch_v2.hts?ws_mode=retrieve_list&id_proceeding=95-102&start=102&end=102&first_time=N.]
- ⁶ See **COMMENTS**, Dr. Michael C. Trahos, August 25, 1994, WT Docket No. 95-102, RM-8499. (http://gulfoss2.fcc.gov/cgi-bin/websql/prod/ecfs/comsrch_v2.hts?ws_mode=retrieve_list&id_proceeding=95-102&start=115&end=115&first_time=N).
See **PETITION FOR RECONSIDERATION**, Dr. Michael C. Trahos, July 3, 1996, WT Docket No. 95-102, RM-8499. (http://gulfoss2.fcc.gov/cgi-bin/websql/prod/ecfs/comsrch_v2.hts?ws_mode=retrieve_list&id_proceeding=95-102&start=15&end=15&first_time=N).
See **REPLY COMMENTS**, Dr. Michael C. Trahos, August 16, 1996, WT Docket No. 95-102, RM-8499. http://gulfoss2.fcc.gov/cgi-bin/websql/prod/ecfs/comsrch_v2.hts?ws_mode=retrieve_list&id_proceeding=95-102&start=8&end=8&first_time=N.
- ⁷ **REPORT & ORDER**, WT Docket No. 95-102, RM-8499, FCC 96-215, May 10, 1996, 61 FR 28768, June 6, 1996. [See http://gulfoss2.fcc.gov/cgi-bin/websql/prod/ecfs/comsrch_v2.hts?ws_mode=retrieve_list&id_proceeding=95-102&start=16&end=16&first_time=N or <http://www.fcc.gov/Bureaus/Wireless/Orders/1996/fcc96215.txt>.]
MEMORANDUM OPINION & ORDER, WT Docket No. 95-102, RM-8499, FCC 98-293, October 30, 1998, 64 FR 14639, March 26, 1999. [See http://gulfoss2.fcc.gov/cgi-bin/websql/prod/ecfs/comsrch_v2.hts?ws_mode=retrieve_list&id_proceeding=95-102&start=1&end=1&first_time=N or <http://www.fcc.gov/Bureaus/Wireless/Orders/1998/fcc98293.txt> or <http://www.fcc.gov/Bureaus/Wireless/Orders/1998/fcc98293.wp> (WP 5.1 document).]

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- ⁸ **47 CFR 95.627.** [See <http://www.fcc.gov/mmb/asd/bickel/47CFRrule.html> and <http://frwebgate.access.gpo.gov/cgi-bin/get-cfr.cgi?TITLE=47&PART=95&SECTION=627&YEAR=2000&TYPE=TEXT>.]
- ⁹ **47 CFR 95.633.** [See <http://www.fcc.gov/mmb/asd/bickel/47CFRrule.html> and <http://frwebgate.access.gpo.gov/cgi-bin/get-cfr.cgi?TITLE=47&PART=95&SECTION=633&YEAR=2001&TYPE=TEXT>.]
- ¹⁰ **47 CFR 95.639.** [See <http://www.fcc.gov/mmb/asd/bickel/47CFRrule.html> and <http://frwebgate.access.gpo.gov/cgi-bin/get-cfr.cgi?TITLE=47&PART=95&SECTION=639&YEAR=2001&TYPE=TEXT>.]
- ¹¹ **47 CFR 95.647.** [See <http://www.fcc.gov/mmb/asd/bickel/47CFRrule.html> and <http://frwebgate.access.gpo.gov/cgi-bin/get-cfr.cgi?TITLE=47&PART=95&SECTION=647&YEAR=2001&TYPE=TEXT>.]
- ¹² **PMR 446 Information Sheet.** [See http://www.radio.gov.uk/publication/ra_info/ra357.htm.]
- ¹³ **Ibid** at Endnote 4.
- ¹⁴ **Ibid**.
- ¹⁵ **UK Interface Requirement 2009 – Private Business Mobile Radio Operating in the License Exempt PMR 446 MHz Band.** [See <http://www.radio.gov.uk/publication/interface/word-pdf/ir2009.pdf>.]
- ¹⁶ **47 CFR 2.104(b)(1).** [See <http://www.fcc.gov/mmb/asd/bickel/47CFRrule.html> and <http://frwebgate.access.gpo.gov/cgi-bin/get-cfr.cgi?TITLE=47&PART=2&SECTION=104&YEAR=2001&TYPE=TEXT>.]
- ¹⁷ **47 CFR 2.106,** International Footnote S5.270 & S5.284. [See <http://www.fcc.gov/mmb/asd/bickel/47CFRrule.html> and <http://frwebgate.access.gpo.gov/cgi-bin/get-cfr.cgi?TITLE=47&PART=2&SECTION=106&YEAR=2001&TYPE=TEXT>.]
- ¹⁸ **47 CFR 2.104(b)(2).** [See <http://www.fcc.gov/mmb/asd/bickel/47CFRrule.html> and <http://frwebgate.access.gpo.gov/cgi-bin/get-cfr.cgi?TITLE=47&PART=2&SECTION=104&YEAR=2001&TYPE=TEXT>.]
- ¹⁹ **Ibid**, at Footnote 17.
- ²⁰ **ARRL 70cm BAND PLAN.** [See <http://www.arrl.org/FandES/field/regulations/bandplan.htm> - 70cm.]
The 446.0 – 446.1 MHz segment is predominately used for repeater output and simplex ARS operations.

ATTACHMENT A

FOOTNOTE 1

ERC/DEC/(98)25

EUROPEAN RADIOCOMMUNICATIONS COMMITTEE

ERC Decision
of 23 November 1998
on the harmonised frequency band
to be designated for PMR 446

(ERC/DEC/(98)25)



EXPLANATORY MEMORANDUM

1 INTRODUCTION

PMR 446 provides a new concept for short range voice communications. PMR 446 is intended to operate under relaxed licensing conditions on collective frequencies shared by many users on an uncoordinated basis.

The equipment uses integral antennas only in order to maximise sharing and minimise interference. PMR 446 is intended for voice communications.

Individual CEPT administrations were faced with the request from industry and manufacturers to open up spectrum for such an application. Due to the requirement for free circulation and cross border operation it became indispensable to identify a harmonised band for PMR 446.

In order to introduce this category of equipment within CEPT, the ERC decided that harmonised conditions should be developed, as far as possible.

2 BACKGROUND

In the course of the DSI phase II process the need for a future home for the above-mentioned short range communications was extensively discussed. This application may not be confused with applications which are classified under the Short Range Devices for which a separate ERC-Recommendation ERC 70-03 has been developed.

The original DSI phase II proposal identified parts of the band 430-432/438-440 MHz for deregulated PMR. However, this proposal could not be accepted by CEPT administrations.

Furthermore the bands 888-890/933-935 MHz which had been designated to DSRR were identified as essential bands necessary for the extension of GSM.

As a result of the discussions in the FM WG and a survey carried out by ERO it was concluded that the band 446.000-446.100 MHz would offer the best possibilities for the introduction of PMR 446 throughout Europe. It was recognised that during a transition period a number of countries would continue to allow a national frequency band for PMR 446 "like" services whereas some countries indicated their need for some time to reform the frequency band 446.000-446.100 MHz.

It is generally believed that the introduction of PMR 446 will considerably alleviate the work of administrations (temporary licensing, frequency co-ordination....) and also will provide for a deregulated environment for short range voice communications.

The degree of deregulation will largely depend on the national legislation of individual CEPT countries.

The designation of a harmonised band will form the basis for the free circulation of PMR 446 within Europe and will furthermore facilitate the mutual recognition of conformity assessment.

3 REQUIREMENT FOR AN ERC DECISION

The allocation or designation of a frequency band for its use by a service or system under specified conditions in CEPT member countries is laid down by law, regulation or administrative action. The ERC recognises that for PMR 446 to be introduced successfully throughout Europe, manufacturers and users must be given the confidence to make the necessary investments in this radiocommunication system. To this end the ERC has adopted harmonised band for this type of system.

A commitment by CEPT administration will provide a clear indication that the required frequency bands will be available on time and on a European-wide basis.

**ERC Decision
of 23 November 1998
on the harmonised frequency band
to be designated for PMR 446
(ERC/DEC/(98)25)**

The European Conference of Postal and Telecommunications Administrations,

considering:

- a) that the band 446.000-446.100 MHz has been identified as the future home for PMR 446;
- b) that there is a need for a European-wide harmonised frequency band for such an application;
- c) that European harmonisation will reduce difficulties in border areas;
- d) that administrations should consider as a matter of priority all technical and regulatory measures which are necessary for the introduction of PMR 446;
- e) the need for a deregulated alternative for short range voice communications;

noting:

that process of refarming of the band 446.000-446.100 MHz for the use by PMR 446 may take some time in certain CEPT countries;

DECIDES

- 1. that for the purpose of this Decision PMR 446 shall comply with the European Telecommunications Standard ETS 300 296;
- 2. to designate the band 446.000-446.100 MHz for the use of PMR 446 with a channel plan based on 12.5 kHz spacing where the lowest carrier frequency is 446.00625 MHz;
- 3. that the equipment shall use only integral antenna and an effective radiated power not exceeding 500 mW;
- 4. that this Decision shall enter into force by 1 December 1998;
- 5. that administrations shall communicate the national measures implementing this Decision to the ERC Chairman and the ERO when the Decision is nationally implemented.

Note:

Please check the ERO web site (www.ero.dk) under "Documentation / Implementation" for the up to date position on the implementation of this and other ERC Decisions.

ATTACHMENT B

FOOTNOTE 2

ERC/DEC/(98)26

EUROPEAN RADIOCOMMUNICATIONS COMMITTEE

ERC Decision
of 23 November 1998
on Exemption from Individual
Licensing of
PMR 446 equipment

(ERC/DEC/(98)26)



EXPLANATORY MEMORANDUM

1 INTRODUCTION

Licensing is an appropriate tool for Administrations to regulate the use of radio equipment and the efficient use of the frequency spectrum. However, the technical characteristics of radio equipment require less intervention from the Administrations as far as the installation and use of equipment is concerned. Administrations and especially users, retailers and manufacturers will benefit from a more deregulated system of authorising the use of radio equipment.

2 BACKGROUND

There is a general agreement that when the efficient use of the frequency spectrum is not at risk and as long as harmful interference is unlikely, the installation and use of radio equipment might be exempted from licence.

In general the CEPT Administrations apply similar systems of licensing and exemption from individual licensing. However, different criteria are used to decide whether radio equipment should be licensed or exempted from an individual licence.

The free movement of radio equipment and the provision of Pan European wide services will be greatly assisted when all CEPT Administrations would exempt the same categories of radio equipment from licensing and apply -to achieve that- the same criteria to decide on this.

When radio equipment is subject to an exemption from individual licensing, anyone can buy, install, possess and use the radio equipment without any prior individual permission from the Administration. Furthermore, the Administration will not register the individual equipment. The use of the equipment can be subject to general provisions or general licence.

3 REQUIREMENT FOR AN ERC DECISION

ERC/REC 01-07 that was adopted in 1995 listed harmonised criteria for the Administrations to decide whether an exemption of individual licence should be applied. The aim of this Decision is to exempt PMR 446 equipment from individual licensing because they fulfil the criteria for exemption listed in ERC/REC 01-07.

**ERC Decision
of 23 November 1998**

**on Exemption from Individual Licensing of PMR 446 equipment
(ERC/DEC/(98)26)**

The European Conference of Postal and Telecommunications Administrations,

considering:

- a) that within the CEPT Administrations there is a growing awareness of a need for harmonisation of licensing regimes in order to facilitate the free circulation of radio equipment;
- b) that it therefore would be desirable for CEPT Administrations to have common licence regimes at their disposal in order to control the installation, ownership and use of radio equipment;
- c) that there is a strong desire within the CEPT Administrations to improve efficiency by reducing the control exercised by Administrations in the form of mandatory provisions;
- d) that there is considerable difference in national licensing, laws and regulations and that harmonisation therefore can only be introduced gradually;
- e) that national licensing regimes should be as simple as possible, in order to minimise the burden upon the Administrations and users of equipment;
- f) that intervention by the national Administrations with respect to the use of radio equipment should in general not exceed the level necessary for the efficient use of the frequency spectrum;
- g) that Administrations should work towards the exemption of relevant radio equipment from individual licensing based on harmonised criteria detailed in ERC/REC 01-07;

noting

- (a) that PMR 446 equipment as defined in ERC/DEC/(98)25 operates within the 446.000-446.100 MHz band providing short range voice communications;
- (b) that PMR 446 equipment complying with ETS 300 296 also fulfil the criteria for exemption listed in ERC/REC 01-07;

DECIDES

- 1. to exempt PMR 446 equipment that fulfil noting a) and b) from individual licensing;
- 2. that this Decision shall enter into force on 1 December 1998 at the latest;
- 3. that CEPT Administrations shall communicate the national measures implementing this Decision to the ERC Chairman and the ERO when the Decision is nationally implemented.

Note:

Please check the ERO web site (www.ero.dk) under "Documentation / Implementation" for the up to date position on the implementation of this and other ERC Decisions.

ATTACHMENT C

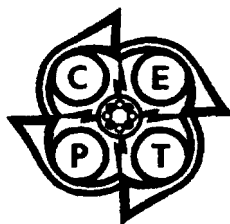
FOOTNOTE 3

ERC/DEC/(98)27

EUROPEAN RADIOCOMMUNICATIONS COMMITTEE

ERC Decision
of 23 November 1998
on free circulation and
use of PMR 446 equipment in
CEPT member countries enlarging the field
of application of ERC/DEC/(95)01

(ERC/DEC/(98)27)



EXPLANATORY MEMORANDUM

1 INTRODUCTION

The ERC/DEC(95)01 identifies three levels of free circulation of radio equipment in CEPT member countries as follows:

1. free circulation without permission of using the radio equipment;
2. free circulation with permission of using the radio equipment;
3. free circulation with the permission of placing the radio equipment on the market.

The ERC/DEC/(95)01 only covers levels 1 and 2 on free circulation of GSM and DECT mobile equipment, Omnitrac terminals for the Euteltracs system, Inmarsat-C terminals, Inmarsat-M terminals and PR-27 mobile stations.

This new Decision, however, deals with only the level two of free circulation since level one is already covered by ERC/DEC/(95)01.

2 BACKGROUND

It is a general aim of the European Radiocommunications Committee (ERC) to facilitate the free circulation of radio equipment.

The aim of this Decision is to allow the free circulation of PMR 446 equipment in the same way as ERC/DEC/(95)01 does for the radio equipment categories identified therein.

Separate Decisions have been made for free circulation and use of other categories of equipment.

3 REQUIREMENT FOR AN ERC DECISION

According to the ERC Rules of Procedure, an ERC Decision cannot be amended without abrogating the existing one. Therefore, there is a need for a separate ERC Decision to allow for free circulation and use of PMR 446 equipment.

**ERC Decision
of 23 November 1998**

**on free circulation and use of PMR 446 equipment in CEPT member countries
enlarging the field of application of ERC/DEC/(95)**

(ERC/DEC/(98)27)

“The European Conference of Postal and Telecommunications Administrations,

considering:

- a) that ERC/DEC/(95)01 provides for free circulation and use of a limited number of radio equipment categories;
- b) that PMR 446 equipment shall operate within the 446.000-446.100 MHz band providing short range voice communications;
- c) that PMR 446 equipment complying with ETS 300 296 also fulfil the conditions for free circulation and use under the general principles of ERC/DEC/(95)01;

DECIDES:

- 1. that administrations allow the free circulation and use of PMR 446 equipment as defined in ERC/DEC/(98)25 under the same conditions, in the same form and following the same procedures as laid down in ERC/DEC/(95)01;
- 2. that this Decision shall enter into force by 1 December 1998;
- 3. that administrations shall communicate the national measures implementing this Decision to the ERC Chairman and the ERO when the Decision is nationally implemented.”

Note:

Please check the ERO web site (www.ero.dk) under “Documentation / Implementation” for the up to date position on the implementation of this and other ERC Decisions.

ATTACHMENT D

FOOTNOTE 4

**PMR 446
SERVICE
INTRODUCED IN
THE UNITED
KINGDOM**



PMR 446 Service Introduced in the United Kingdom

DTI Press Release - 30 April 1999

The licence exemption regulations (SI 1999/930) authorising the PMR 446 service came into force on 19 April 1999. PMR 446 radios that meet the licence exemption regulations can now be used on a licence exempt basis throughout the United Kingdom.

PMR 446 is a handportable short range voice communication system, which provides a basic but effective radio service for both business and non business users. It is ideal for providing communication over short distances; such as within office buildings, factories and building sites.

Notes for Editors

1. The PMR 446 service has been introduced following the adoption by the European Radiocommunications Committee (ERC) of Decisions which comply member states to introduce the service. In introducing the PMR 446 service, the Radiocommunications Agency has fully complied with the ERC's Decisions.
2. There are eight 12.5 kHz simplex frequencies in the 446.0 - 446.1 MHz band, which have been harmonised (but not yet authorised) for use across Europe.
3. The frequencies are shared and are not suitable for safety of life use or for users who need to have access to frequencies at particular locations and times.
4. The PMR 446 service is unprotected and the Agency will not become involved in interference and/or channel sharing disputes between users.
5. PMR 446 radio equipment must be handportable, have an integral antenna, have a maximum ERP of 500 mW and be compliant with ETS 300 296.
6. A PMR 446 information sheet ([RA 357](#)) is available from:

The Information and Library Service
Radiocommunications Agency
New King's Beam House
22 Upper Ground
London SE1 9SA


E-mail: library.ra@gnet.gov.uk

7. For further information contact:

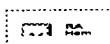
Graham Noyce
Private Business Systems Unit
Radiocommunications Agency
New King's Beam House
22 Upper Ground
London SE1 9SA

Fax: 020 7211 0118

E-mail: noyceg@ra.gnet.gov.uk

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P/99/365



ATTACHMENT E

FOOTNOTE 12

**PMR 446
INFORMATION
SHEET**



PMR 446 Information Sheet

1. PMR 446

The PMR (Private Mobile Radio) 446 service has been introduced in the United Kingdom following the adoption by the CEPT/ERC¹ of the Decisions ERC/DEC/(98) 25, 26 and 27 which comply member states to:

- set aside the band 446.0 - 446.1 MHz for a PMR 446 service;
- exempt PMR 446 equipment, using frequencies in the 446.0 - 446.1 MHz band, from individual licensing; and
- allow the free circulation and use of PMR 446 equipment using frequencies in the 446.0 - 446.1 MHz band and complying with the European technical standard ETS 300 296.

In introducing the PMR 446 service the Radiocommunications Agency has fully complied with the ERC's decisions.

2. WHAT IS PMR 446?

PMR 446 is a handportable short range voice only communication system, which provides a basic but effective radio service for both business and non business users. It is ideal for providing communication over short distances; such as within office buildings, factories and building sites. Only speech transmissions can be made.

3. LICENCE EXEMPT

The PMR 446 service is licence exempt; users do not require a licence to use PMR 446 radios, provided the equipment complies with the requirements in section 5 below.

4. FREQUENCIES

There are eight 12.5 kHz simplex frequencies which can be used anywhere in the United Kingdom. The frequencies have been harmonised (but not necessarily authorised) for use across Europe. The channel centre frequencies are as follows:

446.00625 MHz	446.01875 MHz
446.03125 MHz	446.04375 MHz
446.05625 MHz	446.06875 MHz
446.08125 MHz	446.09375 MHz

The frequencies are shared and users may, under local heavy use conditions, experience interference and channel sharing problems. These may be reduced by changing frequency and/or CTCSS tone and/or DCS code. PMR 446 is not suitable for safety of life use or for users who need to have access to frequencies at particular locations and times.

As a licence exempt service, PMR 446 is unprotected and the Agency will not become

involved in interference or channel sharing disputes between users.

5. RADIO EQUIPMENT

PMR 446 radio equipment must be handportable, have an integral antenna, have a maximum ERP of 500 mW and be compliant with ETS 300 296.

PMR 446 radio equipment must use the above frequencies only. Radio equipment which can operate on any other frequency, including Short Range Business Radio (SRBR) equipment capable of using frequencies in the 461 MHz band, must not be used for the PMR 446 service.

6. OTHER FACILITIES

The Agency strongly recommends that CTCSS, DCS and/or selective calling is used with PMR 446 radios, but the use of these signalling systems is not mandatory.

The Agency permits the use of speech privacy measures, including speech inversion, with PMR 446 radios.

The Agency also permits the inclusion of broadcast (AM/FM) radio receivers in PMR 446 radios, where there is no provision for the received broadcast signal to be re-transmitted on the PMR 446 radio frequencies.

The following accessories can be used with PMR 446 radios:

- external microphones including VOX type microphones;
- earphones, headphones and external loudspeakers; and
- DC power sockets, charge sockets and battery packs.

The accessories must be connected by appropriate sockets installed by the manufacturer at the time of manufacture and conformance evaluation and their use must not affect the RF characteristics of the radios.

In all cases, the use of these facilities must not cause any change to, or effect on, the performance characteristics of the PMR 446 radio, as permitted under the Wireless Telegraphy (Exemption) Regulations (SI 1999/930).

The Agency does not permit PMR 446 radios to be connected to the Public Switched Telephone Network (PSTN) or other telephone networks.

7. HOW TO USE PMR 446 EQUIPMENT

Before speaking you should check that a frequency is free by either listening or using the channel busy indicator. When you speak you should identify yourself and the person you are calling. The radios allow communication in only one direction at a time so you will find it helpful to identify when you have finished speaking. It is expected that the frequencies will become particularly busy in cities or where large numbers of people gather such as large sporting events. All users will benefit if messages are kept short.

8. REPLACEMENT SERVICE FOR THE SRBR SPEECH SERVICE

PMR 446 will replace the SRBR speech service. The Agency stopped issuing new SRBR

licences on 30 September 1999, but existing SRBR licensees can continue to use SRBR speech equipment on SRBR speech frequencies until 31 December 2003. No use after this date will be permitted.

9.ADAPTATION OF SRBR EQUIPMENT FOR PMR 446 USE

Some SRBR radios may be able to be adapted for PMR 446 use. To be used for PMR 446 the radios must comply with all the requirements listed in section 5 above. Whether or not an SRBR radio can be adapted for PMR 446 use will depend on the frequency range and type of antenna used. It is an Agency requirement that any reprogramming of SRBR radios is carried out by the manufacturer or radio suppliers approved by the manufacturer only. Changes to non integral antennas will need to demonstrate compliance with ETS 300 296. For more information on whether your SRBR radio can be adapted for PMR 446 use, contact your supplier.

10. USE OF PMR 446 RADIO EQUIPMENT OUTSIDE THE UNITED KINGDOM

PMR 446 radio equipment can be used in CEPT member countries that have implemented the ERC Decisions listed above.

Before using PMR 446 radios outside the United Kingdom, users should check that the relevant administration has implemented the Decisions. Users who fail to do this and use their radios overseas, may break the laws of the country concerned, run the risk of prosecution and the confiscation of equipment.

Details of the progress made by CEPT member countries in implementing PMR 446 can be obtained from the European Radiocommunications Office (ERO) website <http://www.ero.dk>

11.INTERFERENCE TO LICENSEES IN 446.0 446.1 MHZ BAND

The PMR 446 frequencies are interleaved between existing simplex on-site PBR frequencies. It is expected that little interference will be caused to users on these frequencies. Licensees who believe they may be suffering interference from PMR 446 equipment should contact their Agency Local Licensing Centre.

12.FURTHER INFORMATION

For further information about the PMR 446 service contact:

PBS Central Licensing Unit
Radiocommunications Agency
Wyndham House
189 Marsh Wall
London E14 9SX
Tel: 020 7211 0199
Fax: 020 7211 0118

13.FOR INFORMATION ON OTHER RADIO MATTERS

The Radiocommunications Agency has produced a range of information sheets, general publications, licence application forms and guidance notes, concerning the use of the radio spectrum. These publications, unless otherwise stated, are available free of charge on a single copy basis and may be obtained from:

The Library and Information Service

Radiocommunications Agency

Wyndham House

189 Marsh Wall

London E14 9SX

Tel: 020 7211 0502/0505

Fax: 020 72110507

E-mail: library.ra@gnet.gov.uk

Web site: www.radio.gov.uk

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NOVEMBER 1999

RA 357

ATTACHMENT F

FOOTNOTE 15

**UK INTERFACE
REQUIREMENT
2009 – PRIVATE
BUSINESS MOBILE
RADIO OPERATING
IN THE LICENSE
EXEMPT PMR 446
MHZ BAND**



**UK Interface Requirement 2009
Private Business Mobile Radio
Operating in the licence exempt
PMR 446 MHz band
(Version 1.1)**

98/34/EC Notification Number: 2000/275/UK

Published 15 December 2000]

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References

ETS 300 296 ETSI Telecommunication Standard – Radio Equipment and Systems (RES); Land mobile group; Technical characteristics and test conditions for radio equipment using integral antennas intended primarily for analogue speech

1. Foreword

- 1.1 The Radio Equipment and Telecommunications Terminal Equipment Directive 99/5/EC (R&TTE Directive) was implemented in the United Kingdom (UK) on the 8 April 2000 by The Radio Equipment and Telecommunications Terminal Equipment Regulations 2000, Statutory Instrument 2000 No. 730. In accordance with Articles 4.1 and 7.2 of Directive 1999/5/EC, this UK Radio Interface Requirement contains the requirements for the use of private business mobile radio systems in the PMR 446 frequency band.
- 1.2 Nothing in this UK Radio Interface Requirement shall preclude the need for equipment to comply with the requirements of Directive 1999/5/EC.
- 1.3 It is required by the Wireless Telegraphy Act 1949 that no radio equipment is installed or used in the UK except under the authority of a licence granted by or otherwise exempted by regulations made by the Secretary of State. It is a condition of such a licence or exemption regulations as appropriate that the equipment must meet the minimum requirements specified in this UK Radio Interface Requirement for the stated equipment types and for the stated frequency bands.
- 1.4 The criteria given in the main body of this UK Radio Interface Requirement will apply to licence exempt PMR 446 MHz private business mobile radio systems (PBR) in the UK.
- 1.5 This UK Radio Interface Requirement will be revised as necessary to follow;
 - i) current technology developments for reasons related to the effective and appropriate use of the spectrum in particular maximising spectrum utilisation; and
 - ii) changes to the available spectrum allocated for PMR 446 radio systems.
- 1.6 All UK Radio Interface Requirements notified under Directive 98/34/EC will be published and will be made available free of charge from the RA Information and Library Service and/or the RA web-site. The addresses for both the Library and the web-site are given on the back cover of this document.
- 1.7 Further information on this UK Radio Interface Requirement can be obtained from the technical enquiry contact given on the back of this document.

2. Minimum Equipment Requirements for Operation within the UK

- 2.1 The minimum radio requirements in this document are made for reasons related to the effective and appropriate use of the radio spectrum, in particular maximising spectrum utilisation.
- 2.2 This UK Radio Interface Requirement gives a high level description of how the spectrum in the UK is used for PMR 446 radio systems. It does not prescribe a technical interpretation of the 'essential requirements' of Directive 1999/5/EC.
- 2.3 This UK Radio Interface Requirement therefore stipulates the necessary equipment parameters for the use of licence exempt PMR 446 radio equipment in the UK. Table 2.1 contains the relevant equipment parameters. These together with the 'essential requirement' detailed in Article 3.2 of the Directive 1999/5/EC constitute the minimum equipment requirements for PMR 446 radio equipment within the UK.

Table 2.1: Minimum Equipment Requirements

Operational Frequency Range	Channel Centre Frequencies (MHz)	Additional Technical Information
	446.00625 446.01875 446.03125 446.04375 446.05625 446.06875 446.08125 446.09375	1 These frequencies are shared and users may, under local heavy use conditions, experience interference and channel sharing problems. 2. Equipment may also be capable of reception of broadcast (AM/FM) frequencies. 3. Use of speech privacy measures, including speech inversion, is permitted. 4. PMR 446 may only be used for speech transmissions
Channel Spacing	12.5 kHz	
Modulation	Angle	
Output Power	500 mW (maximum ERP)	

Annex A Additional Performance Parameters (Informative)

- A.1 Tables A.1, to A. 3 stipulate additional performance parameters and limits that the Radiocommunications Agency assume are fulfilled by PMR 446 radio equipment when planning and managing the radio spectrum in the UK.
- A.2 Where equivalent performance parameters and limits are defined in relevant harmonised standards under Directive 99/5/EC, those limits shall take precedence.
- A.3 The additional performance parameters and limits contained in this annex are based on the following reference standards.

ETS 300 296

Notes

1. It is assumed that equipment will meet, where indicated, the levels in tables A.2 and A.3 under normal and extreme conditions as defined in Table A.1. Manufacturers are free to declare different reasonable operating conditions. In such cases it is the responsibility of the user to ensure they operate the equipment within these conditions.
2. The limits given in these tables assume that equipment performance is assessed using the test methods contained in ETR 027 (Radio Equipment and Systems (RES); Methods of Measurement for Private Mobile Radio Equipment) and the requirements contained in EN 300 793 (Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Land Mobile Service; Presentation of Equipment for Type Testing).

Table A.1: Additional Performance Parameters - Operating Conditions

Environmental Conditions		Temperature	Relative Humidity	Additional Technical Information
	Normal conditions	+15°C to +35°C	20% to 75%	
	Extreme conditions	-20°C to +55°C	20% to 75%	1. For handportable stations with integral power supplies frequency error shall be measured over the range 0 to 30°C
Mains voltage	Normal conditions	Nominal mains voltage		
	Extreme conditions	Nominal mains voltage $\pm 10\%$		

Table A.2: Additional Performance Parameters - Transmitter

Adjacent channel power	- 60 dBc			
Spurious emissions		Frequency range	Tx operating	Tx Standby
	Conducted	9 kHz to 1 GHz	0.25 μ W (-36 dBm)	2.0 nW (-57 dBm)
		1 GHz to 4 GHz	1 μ W (30.0 dBm)	20 nW (-47.0 dBm)
	Radiated	30 MHz to 1 GHz	0.25 μ W (-36 dBm)	2.0 nW (-57 dBm)
		1 GHz to 4 GHz	1 μ W (30.0 dBm)	20 nW (-47.0 dBm)
Carrier power tolerance	Normal conditions			Extreme conditions
	± 1.5 dB			-3/+2 dB
Frequency deviation	± 2.5 kHz			
Selective Signalling	Digitally Coded Squelch (DCS) or Continuous tone control and signalling system (CTCSS) (not mandatory but strongly recommended)			
Frequency error	300 to 500 MHz			
	± 1 kHz (base) ± 1.5 kHz (mobile)			For handportable equipment with integral power supplies, under extreme temperature conditions the frequency error shall not exceed ± 2.5 kHz between 300 and 500 MHz

Table A.3: Additional Performance Parameters - Receiver

Co-channel rejection	Between -12 dB and 0 dB relative to +6 dB μ V	
Adjacent channel selectivity	Normal conditions	Extreme conditions
	Minimum 60 dB relative to +6 dB μ V	Minimum 50 dB relative to +6 dB μ V
Spurious response rejection	70 dB relative to +6 dB μ V	
Intermodulation response rejection	70 dB (base) relative to +6 dB μ V	
	60 dB (mobile) relative to +6 dB μ V	
Spurious radiations	9 kHz to 1 GHz	1 to 4 GHz
	2.0 nW (-57 dBm)	20.0 nW (-47 dBm)
Receiver response rejection	67 dB relative to +6 dB μ V	
Blocking or desensitisation	84 dB relative to +6 dB μ V	

Document history

Draft	Date	Changes

Radiocommunications Agency

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Information and Library Service:
Tel.: +44-(0) 207-211-0502 or 0505
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Private Business Systems Unit
Tel.: +44-(0)207-211-0181
Fax: +44-(0)207-211- 0118
Email: henleya@ra.gsi.gov.uk

Web site: www.radio.gov.uk

This is a UK Radio Interface Requirement

Postal address:

Private Business Systems Unit, Wyndham House, 189 Marsh Wall, LONDON, E14 9SX